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# North Dakota Corn

## *Variety Trial Results for 2019 and Selection Guide*

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This publication reports the results of corn hybrid trials that were conducted by NDSU research and Extension personnel throughout North Dakota. The hybrids tested were entered voluntarily by the companies that market them, and the management of these trials was financed partially by the entry fee those companies paid. Links to the participating companies are summarized in Table 1. Additional information and data for a given location may be available at [www.ag.ndsu.edu/varietytrials/corn](http://www.ag.ndsu.edu/varietytrials/corn) and [www.ag.ndsu.edu/cornhybridtesting](http://www.ag.ndsu.edu/cornhybridtesting). When selecting a hybrid, look at its performance at multiple locations and/or across years if possible.

### **Corn Production and Weather in 2019**

In 2019, the area of corn planted in North Dakota was 3.55 million acres, up from the 3.15 million acres planted in 2018. The average yield for the state in 2019 was estimated at 142 bushels per acre, down from the 146 bushels per acre recorded in 2018.

Corn was planted later than normal due to a cool, wet spring. That, coupled with significantly fewer growing degree days (GDD) during the summer, resulted in delayed maturity. October and November were cold and wet, so most corn dried little, resulting in nearly 2 million acres still unharvested at the time of writing (Dec. 15).

### **Experimental Procedures**

Hybrids were planted in replicated plots in each location. Plot size, number of replications and experimental design varied by location. Information regarding planting and harvesting dates and other management practices is available from the researchers implementing the research. Grain yield was adjusted to 15.5% moisture.

## Data Analysis

Data were analyzed using analyses of variance (ANOVA). Least significant differences (LSDs) at the 5% and 10% levels were calculated from these analyses and are placed at the bottom of each column of data. These LSD values apply only to the numbers in the column in which they appear. If the difference (for instance, for yield) between two varieties exceeds the LSD value, it means that with 95% or 90% confidence, the higher-yielding variety has a significant yield advantage. Conversely, when the difference between the means of two varieties is less than the LSD value, this indicates these varieties have no statistical difference between them. The coefficient of variation (CV), which also is placed at the bottom of each column, is a measure of the variability for that trait within the trial.

Hybrids are ranked in descending order for yield in each table. Carefully consider grain moisture at harvest in addition to yield. Comparing the yield of hybrids with similar moisture levels allows you to compare the yield of hybrids with similar relative maturities (RMs). The RMs listed in the tables have been provided by the company marketing these hybrids. In some cases, the industry-provided estimate of RM might not correspond precisely to the moisture levels obtained in trials reported in this publication.

## Special Notes for 2019

Results from the corn hybrid trial at Langdon are not reported due to a snowstorm rendering the plots unharvestable. Corn was very wet in most locations at the time of harvest. Moisture meters were used to obtain an estimate of the moisture content of the grain at harvest. Even though the meters used were calibrated for high moisture, the values recorded were higher than the normal range. Freezing temperatures also may have impacted the results from these meters; therefore, the values listed in the publication are more variable and less accurate than normal, especially for values greater than 30%, although the relative mean values are thought to still be useful in comparing hybrids.

When test weight is reported, the grain sample was oven dried before measuring. This drying process may have resulted in the samples having a slightly lower test weight than might be obtained by natural field drying, but may be similar to what is obtained from artificial drying on the farm.

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**Table 1. Companies Participating in 2019 NDSU Corn Hybrid Trials.**

<u>Company</u>	<u>Abbreviated</u>	<u>Website</u>
Channel	Channel	<a href="http://www.channel.com">www.channel.com</a>
Croplan Genetics	Croplan	<a href="http://www.winfieldunited.com">www.winfieldunited.com</a>
Dahlman Seed	Dahlman	<a href="http://www.dahlmanseed.com">www.dahlmanseed.com</a>
Dairyland Seed	Dairyland	<a href="http://www.dairylandseed.com">www.dairylandseed.com</a>
Dekalb	Dekalb	<a href="http://www.dekalb.com">www.dekalb.com</a>
Dyna-Gro Seed	Dyna-Gro	<a href="http://www.dynagroseed.com">www.dynagroseed.com</a>
Golden Harvest	Golden H.	<a href="http://www.goldenharvestseeds.com">www.goldenharvestseeds.com</a>
Hefty Seed	Hefty	<a href="http://www.heftyseed.com">www.heftyseed.com</a>
Innotech	Innotech	<a href="http://www.robseeco.com">www.robseeco.com</a>
Integra Fortified Seed	Integra	<a href="http://www.integraseed.com">www.integraseed.com</a>
Latham	Latham	<a href="http://www.lathamseeds.com">www.lathamseeds.com</a>
Legacy Seeds	Legacy	<a href="http://www.legacyseeds.com">www.legacyseeds.com</a>
Legend Seeds	Legend	<a href="http://www.legendseeds.net">www.legendseeds.net</a>
Peterson Farms Seed	Peterson	<a href="http://www.petersonfarmsseed.com">www.petersonfarmsseed.com</a>
Proseed	Proseed	<a href="http://www.proseed.net">www.proseed.net</a>
REA Hybrids	REA	<a href="http://www.rea-hybrids.com">www.rea-hybrids.com</a>
Renegade Seed	Renegade	<a href="http://www.mkap.com/seed/renegade">www.mkap.com/seed/renegade</a>
Rob-See-Co	Rob-See-Co	<a href="http://www.robseeco.com">www.robseeco.com</a>
Stine Seed	Stine	<a href="http://www.stinseed.com">www.stinseed.com</a>
Syngenta NK Brand	Syng NK	<a href="http://www.syngenta-us.com/corn/nk">www.syngenta-us.com/corn/nk</a>
Thunder Seed	Thunder	<a href="http://www.thunderseeds.com">www.thunderseeds.com</a>
Viking	Viking	<a href="http://www.alseed.com/viking">www.alseed.com/viking</a>

**Table 2. 2019 Corn - Average of Southern Locations (Ransom, Richland and Sargent Counties), Early Maturing ( ≤94).**

Authors, J. Ransom and D. Eisinger.

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield				
			Moisture <sup>2</sup>	Weight <sup>2</sup>	Ransom	Richland	Sargent	Average	2-yr. Avg.
			(%)	(lb/bu)	(bu/a)				
Proseed	1794	94	28.0	48.3	225.4	230.3	209.6	222.0	241.6
Latham	LH 3937	89	28.7	49.4	231.2	220.5	203.3	218.2	--
Peterson	79N94	94	28.6	47.9	223.8	216.6	204.1	217.5	--
Channel	194-49	94	29.8	47.6	228.5	221.4	205.8	216.8	239.5
Proseed	1790	90	28.4	50.9	222.1	217.4	203.1	216.2	--
Latham	LH 4375	93	28.0	50.2	244.2	220.0	188.3	215.1	--
Proseed	1591	91	27.3	50.4	228.6	225.2	194.0	215.0	230.6
Dekalb <sup>3</sup>	DKC44-80	94	29.3	48.2	206.6	222.1	215.5	214.6	--
Hefty	H4132	90	27.2	50.1	222.1	219.2	200.4	213.2	--
Integra	4119	91	28.4	50.0	222.0	214.7	209.6	213.1	--
Legend	LR 9891 VT2PRIB	91	29.1	48.3	212.1	224.0	205.2	212.1	--
Legacy	L-3419 VT2P	94	29.0	50.2	221.9	211.9	182.5	209.1	--
Latham	LH 4097	90	27.1	50.7	212.2	221.4	188.4	208.9	--
Latham	LH 4437	94	28.2	49.3	217.6	216.4	178.9	208.7	--
Dahlman	R47-26VT2PRIB	94	28.4	49.8	236.8	209.8	187.7	208.6	--
Legend	LR 9094 VT2PRIB	94	30.4	47.5	202.2	227.1	197.8	208.6	--
REA	3B902	90	26.9	48.6	220.1	210.2	202.4	208.5	231.6
Legend	LR 9993 VT2PRIB	93	29.6	48.5	212.2	220.2	193.3	207.6	226.9
REA	3B891	89	27.6	50.0	225.2	207.9	184.7	205.8	--
Hefty	H4322	93	29.6	47.1	212.1	204.5	195.7	205.5	--
Latham	LH 4454	94	30.6	46.6	219.8	226.0	164.1	202.8	--
Hefty	H4332	93	31.2	47.7	195.0	220.6	199.8	202.1	--
Latham	LR 3827	88	27.9	49.0	195.6	221.1	182.0	201.5	--
Latham	LH 4242	92	29.1	48.3	207.1	199.9	180.1	199.7	--
Latham	LH 4187	91	29.0	48.0	197.7	225.1	181.2	199.5	--
Stine	9316-20	93	28.8	50.1	212.3	204.1	175.6	196.1	--
<b>Conventional hybrids<sup>4</sup></b>									
Proseed	1794	94	28.1	--	223.7	--	--	--	--
Renegade	R1-1592	92	28.6	--	225.8	--	--	--	--
Mean			28.7	49.0	217.5	217.6	193.6	209.5	234.0
CV (%)			4.7	1.9	6.0	7.5	7.9	8.7	--
LSD 0.05			2.3	2.1	21.2	24.3	26.2	17.6	--
LSD 0.10			1.9	1.8	17.8	20.4	21.9	14.7	--

Planting Date: Ransom - May 10, Richland and Sargent - May 13.

Harvest Date: Ransom - Oct. 31, Richland - Nov. 4 , Sargent - Nov. 12.

<sup>1</sup>Relative maturity as given by industry.<sup>2</sup>Moisture values are an average of Sargent and Ransom and test weight is from Sargent only.<sup>3</sup>Farmer provided check.<sup>4</sup>Conventionals were included as part of the trial at the Ransom County site, so the same LSD values apply when comparing with non-conventionals. Because they were not included in all locations, there is no average value for the zone and they have not been sorted by yield as have the other hybrids.

**Table 3. 2019 Corn - Average of Southern Locations (Ransom, Richland and Sargent Counties), Late Maturing ( ≥95).**

Authors, J. Ransom and D. Eisinger.

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield				
			Moisture <sup>2</sup>	Weight <sup>2</sup>	Ransom	Richland	Sargent	Average	2-yr. Avg.
			(%)	(lb/bu)	------(bu/a)-----				
Dahlman	R49-23VT2PRIB	98	28.7	47.4	234.8	230.5	213.0	228.9	--
REA	4B965	96	29.4	48.7	233.8	212.8	222.4	221.2	244.5
Dahlman	R48-21VT2PRIB	96	29.3	48.6	237.1	208.3	218.9	220.2	--
Dairyland	DS-3550AM	95	29.8	46.8	212.1	208.7	236.5	220.1	--
Dairyland	RPM-3715AM	97	27.4	48.6	213.6	224.2	212.1	218.4	--
Legacy	L-3718 VT2P	97	30.2	47.6	223.9	212.1	207.3	218.3	250.7
Latham	LH 4835	98	29.8	47.2	222.7	214.5	207.7	216.4	--
Legacy	L-3617 VT2P	96	29.9	47.7	222.7	208.1	217.6	215.1	238.8
Latham	LH 5025	100	32.1	46.9	211.5	213.5	216.1	214.2	--
Hefty	H4732	97	29.6	48.2	226.1	208.4	200.9	212.7	--
Legacy	L-4118 GENSS	99	30.2	48.5	225.3	212.5	205.5	212.0	238.6
Latham	LH 4517	95	30.2	47.4	210.1	221.8	201.7	211.6	--
REA	5B984	98	30.3	47.0	218.4	225.7	187.5	211.5	--
Latham	LH 4795	97	30.3	46.8	209.7	212.7	207.6	211.1	--
Dairyland	DS-3750AM	97	30.1	50.5	209.1	209.9	215.8	210.9	--
Legend	LR 9895 VT2PRIB	95	30.4	48.7	223.8	212.4	206.8	209.7	236.7
REA	4B972	97	29.4	48.8	220.1	220.3	188.3	208.9	--
Dairyland	RPM-3519AM	96	27.7	51.3	214.1	218.3	195.8	208.3	--
Golden H. <sup>3</sup>	G95D32-3220	95	28.7	50.0	215.0	217.0	200.9	208.3	--
REA	5A982	98	30.1	47.2	222.7	210.1	188.9	207.6	--
Latham	LH 4657	96	30.8	48.6	222.4	201.9	192.3	206.2	--
Channel	198-17	98	30.5	46.1	202.1	211.0	202.7	205.6	--
Legacy	L-3517 VT2P	95	29.6	48.6	211.9	204.5	201.4	204.5	237.1
Proseed	1998	98	30.2	47.7	205.2	233.7	171.5	202.8	--
Dekalb <sup>3</sup>	DKC47-55	97	30.5	47.5	212.4	187.9	209.2	202.5	--
Peterson	78G95	95	31.9	47.3	215.9	202.7	189.0	201.7	232.5
Integra	4509	95	31.5	46.5	207.8	206.4	187.6	200.6	--
Latham	LH 5095	100	29.9	47.6	204.1	207.6	182.6	200.0	--
Channel	197-90	97	29.3	49.2	206.6	211.4	175.3	199.7	232.2
Latham	LH 4937	99	30.0	47.4	214.6	189.6	193.3	197.4	--
Legend	LR 9097 GENSSRIB	97	31.6	48.6	199.9	177.7	206.9	196.3	--
<b>Conventional hybrids<sup>4</sup></b>									
Peterson	16G95	95	32.6	--	222.5	--	--	--	--
Proseed	1896	96	34.0	--	204.8	--	--	--	--
Proseed	1998	98	30.1	--	224.2	--	--	--	--
Renegade	R2-1695	95	31.1	--	228.2	--	--	--	--
Mean			30.0	48.0	216.4	210.8	202.0	209.8	238.9
CV (%)			4.7	1.9	6.0	7.5	7.9	8.7	--
LSD 0.05			2.3	2.1	21.2	24.3	26.2	17.6	--
LSD 0.10			1.9	1.8	17.8	20.4	21.9	14.7	--

Planting Date: Ransom - May 10, Richland and Sargent - May 13.

Harvest Date: Ransom - Oct. 31, Richland - Nov. 4 , Sargent - Nov. 12.

<sup>1</sup>Relative maturity as given by industry.<sup>2</sup>Moisture values are an average of Sargent and Ransom and test weight is from Sargent only.<sup>3</sup>Farmer provided check.<sup>4</sup>Conventionals were included as part of the trial at the Ransom County site, so the same LSD values apply when comparing with non-conventionals. Because they were not included in all locations, there is no average value for the zone and they have not been sorted by yield as have the other hybrids.

**Table 4. 2019 Corn - Average of Central Locations (Cass, Steele and Traill Counties), Early Maturing (≤87).**

Authors, J. Ransom and D. Eisinger.

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield				
			Moisture <sup>2</sup> (%)	Weight <sup>2</sup> (lb/bu)	Cass	Steele	Traill	Average	2-yr. Avg.
Legacy	L-2847 VT2P	87	28.1	52.6	228.1	227.5	188.2	214.3	233.2
Thunder	6983 VT2P	83	24.0	54.7	224.4	241.8	178.1	212.7	--
Legend	47J086 VIP 3220	86	26.3	54.1	210.3	226.9	197.2	211.3	--
Thunder	6085 VT2P	85	24.3	55.4	200.3	229.4	194.5	210.3	--
Channel	187-49	87	26.5	52.4	196.5	249.6	189.3	210.2	--
Legacy	L-2347 VT2P	83	23.9	54.4	225.4	222.4	184.4	209.8	--
Pioneer <sup>3</sup>	87-71AM	87	29.2	51.0	228.6	218.8	174.3	207.4	--
Peterson	76Q86	86	26.3	53.6	206.5	223.2	184.4	206.5	219.5
Legacy	L-2314 VT2P	83	24.6	54.4	208.8	224.0	180.8	205.9	--
Proseed	1984	84	27.0	52.7	211.8	240.7	164.3	205.2	--
Thunder	6987 VT2P	87	24.9	51.4	208.0	222.7	175.5	203.4	--
Peterson	73S84	84	23.7	55.2	219.1	213.6	175.9	203.4	--
Legend	LR 9886 VT2PRIB	86	31.4	50.7	211.4	227.9	168.2	202.8	214.0
Peterson	74Z87	87	25.2	54.9	213.0	205.4	183.0	201.5	--
Latham	LH 3755	87	30.4	52.6	209.5	218.3	171.4	200.5	--
Channel	185-30	85	26.3	53.0	219.7	218.9	161.8	200.2	--
Stine	9202-G	86	24.9	55.1	204.4	219.4	173.4	198.8	--
Integra	3629	86	24.5	52.1	212.7	206.6	168.2	196.8	221.9
Dekalb <sup>3</sup>	37-86	87	25.4	52.2	221.5	197.5	167.3	196.2	--
Latham	LH 3547	85	25.0	53.7	194.3	186.8	195.3	195.8	--
Proseed	1787	87	26.5	54.0	198.2	204.0	183.4	195.7	213.3
Channel	186-02	86	28.1	52.6	204.6	203.3	171.8	195.0	--
Legacy	L-2817 VT2P	85	25.8	54.1	201.9	229.7	154.3	194.6	215.2
Latham	LH 3325	82	24.3	52.8	206.2	215.3	162.5	192.3	--
Legend	LR 9084 VT2PRIB	84	26.2	53.8	192.2	213.0	172.6	191.7	--
Latham	LH 3695	86	26.9	52.8	186.3	225.1	163.8	189.7	--
Thunder	6986 VT2P	86	26.7	51.6	200.4	196.4	170.8	187.9	--
Latham	LR 3151	81	24.1	52.2	187.2	191.5	181.8	186.1	--
Integra	3718	87	30.1	50.2	203.0	197.1	157.3	183.2	219.6
Latham	LH 3397	83	22.8	53.2	156.9	221.0	142.2	173.3	--
<b>Conventional hybrids<sup>4</sup></b>									
Proseed	1687	87	50.6	--	208.3	--	--	--	--
Mean			26.1	53.2	208.3	217.8	176.3	200.9	219.5
CV (%)			6.2	4.1	6.1	8.0	10.5	9.5	--
LSD 0.05			2.8	5.5	20.5	33.3	30.4	20.2	--
LSD 0.10			2.4	4.6	17.2	27.9	25.5	16.9	--

Planting Date: Cass - May 16, Steele and Traill - May 15.

Harvest Date: Cass - Nov. 6, Steele - Nov. 8, Traill - Nov. 7.

<sup>1</sup>Relative maturity as given by industry.

<sup>2</sup>Grain moisture is from Steele, test weight is an average of Cass and Steele.

<sup>3</sup>Farmer provided check.

<sup>4</sup>Conventionals were included as part of the trial at the Ransom County site, so the same LSD values apply when comparing with non-conventionals. Because they were not included in all locations, there is no average value for the zone and they have not been sorted by yield as have the other hybrids.

**Table 5. 2019 Corn - Average of Central Locations (Cass, Steele and Traill Counties), Late Maturing (≥88).**

Authors, J. Ransom and D. Eisinger.

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield				
			Moisture <sup>2</sup>	Weight <sup>2</sup>	Cass	Steele	Traill	Average	2-yr. Avg.
			(%)		------(bu/ac)-----				
Dairyland	DS-3550AM	95	29.9	52.2	231.3	226.0	194.0	219.5	--
Integra	3839	88	28.6	52.1	222.0	227.6	184.6	214.1	--
Latham	LH 4375	93	27.7	53.6	225.5	240.8	175.9	213.6	--
Peterson	74J89	89	29.1	52.4	217.6	213.7	182.6	206.7	226.1
Legend	LR 9990 VT2PRIB	90	28.0	52.9	233.7	216.3	171.4	206.3	228.7
Legacy	L-3017 VT2P	90	31.0	50.3	212.6	221.6	170.4	202.3	228.1
Proseed	1689	89	29.4	52.4	210.1	230.0	170.6	201.9	215.8
Latham	LH 3937	89	31.1	51.0	211.3	226.5	161.5	201.2	--
Legacy	L-2918 VT2P	89	30.5	52.8	214.4	226.8	168.0	200.2	--
Thunder	6888 VT2P	88	28.9	54.9	219.3	191.6	183.8	198.8	--
Peterson	33B88	88	31.0	48.9	211.8	224.5	158.2	198.5	--
Stine	9212-10	89	26.1	54.1	213.0	210.0	176.0	198.1	--
Latham	LH 4097	90	28.5	51.7	204.4	214.3	174.8	197.2	--
Legend	47J988 3120	88	30.4	49.4	203.8	221.9	163.1	194.9	217.6
Dairyland	DS-3370AM	93	31.8	52.5	208.6	208.0	170.4	192.4	--
Latham	LH 4437	94	32.1	51.2	206.9	211.5	160.3	192.0	--
Latham	LH 4454	94	36.0	50.4	207.4	197.6	172.8	191.9	--
Latham	LH 4242	92	32.6	52.0	208.1	206.1	164.6	191.3	--
Latham	LR 3827	88	30.2	52.1	197.7	219.3	162.5	191.2	--
Dairyland	DS-2989Z	89	27.6	51.7	203.5	191.3	176.6	190.5	--
Channel	189-39	89	28.9	52.9	196.7	208.6	157.7	188.9	--
Latham	LH 4187	91	29.3	54.0	180.0	233.2	160.6	187.3	--
Golden H. <sup>3</sup>	G88F37-3120	88	26.0	54.1	197.9	192.3	180.3	185.8	--
Latham	LH 4517	95	35.8	51.3	213.2	178.2	163.8	185.6	--
<b>Conventional hybrids<sup>4</sup></b>									
Proseed	1689	89	55.2	--	220.6	--	--	--	--
Renegade	EXP89	89	53.1	--	178.6	--	--	--	--
Renegade	R1-1592	92	53.7	--	217.9	--	--	--	--
Renegade	R2-1695	95	50.8	--	240.0	--	--	--	--
Mean			29.7	52.2	210.3	215.6	171.3	198.5	223.3
CV (%)			6.2	4.1	6.1	8.0	10.5	9.5	--
LSD 0.05			2.8	5.5	20.5	33.3	30.4	20.2	--
LSD 0.10			2.4	4.6	17.2	27.9	25.5	16.9	--

Planting Date: Cass - May 16, Steele and Traill - May 15.

Harvest Date: Cass - Nov. 6, Steele - Nov. 8, Traill - Nov. 7.

<sup>1</sup>Relative maturity as given by industry.<sup>2</sup>Grain moisture is from Steele, test weight is an average of Cass and Steele.<sup>3</sup>Farmer provided check.<sup>4</sup>Conventionals were included as part of the trial at the Ransom County site, so the same LSD values apply when comparing with non-conventionals. Because they were not included in all locations, there is no average value for the zone and they have not been sorted by yield as have the other hybrids.

**Table 6. 2019 Corn - Average of Northern Locations (Grand Forks, Marshall and Nelson Counties), Early Maturing ( ≤82).**

Authors, J. Ransom and D. Eisinger.

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield				
			Moisture <sup>2</sup>	Weight <sup>2</sup>	G. F.	Marshall	Nelson	Average <sup>3</sup>	2-yr. Avg.
			(%)	(lb/bu)	------(bu/a)-----				
Croplan <sup>4</sup>	22-88	82	24.0	51.2	254.4	227.3	155.8	241.0	--
Latham	LH 3325	82	24.2	50.9	253.7	222.3	182.8	240.0	--
Legend	LR 9980 VT2PRIB	80	23.3	50.8	252.2	228.0	180.8	239.6	--
Peterson	71V81	81	23.8	49.2	246.8	223.7	172.6	238.0	228.9
REA	1B780	78	21.0	49.2	255.1	218.7	178.1	236.2	237.4
REA	1B821	82	23.5	47.5	250.2	213.9	162.9	233.3	--
Legend	LR 9882 VT2PRIB	82	23.3	48.5	245.2	219.3	153.7	232.9	234.0
Channel	179-12	79	21.4	52.5	240.1	219.9	193.3	231.6	--
Channel	182-09	82	22.5	50.2	243.5	217.3	197.2	229.1	221.3
Latham	LR 3035	80	23.4	51.3	241.1	217.7	166.4	227.1	--
Proseed	1980	80	22.1	49.8	240.8	216.7	166.4	226.0	--
Latham	LH 3117	81	23.0	51.8	235.9	214.6	152.0	226.0	--
Integra	3282	82	24.1	49.9	241.8	204.0	161.9	223.8	--
Latham	LR 3151	81	23.3	57.0	224.8	218.4	168.8	223.7	--
Peterson	78A82	82	23.6	49.5	240.3	209.0	177.2	223.0	217.9
Stine	9140-G	82	25.3	47.8	238.3	208.0	153.0	222.8	234.1
Integra	3009	80	23.7	51.2	229.2	210.2	166.3	222.1	--
Channel	176-02	76	22.2	49.9	224.6	211.8	151.3	220.5	--
Dairyland	DS-2220AM	82	24.1	52.1	224.1	212.3	153.7	217.8	--
Legacy	L-1818 VT2P	79	22.2	50.0	229.7	204.2	158.0	216.0	--
Legacy	L-2213 VT2P	80	22.9	48.6	219.4	208.0	168.5	214.2	210.5
Legacy	L-2019 VT2P	80	23.0	50.0	229.3	193.6	173.3	212.1	--
Latham	LR 2642	76	22.8	51.9	216.7	202.1	158.6	210.4	--
Pioneer <sup>4</sup>	P7907AM	79	21.5	50.4	227.4	192.8	167.4	208.8	--
Legend	LR 9976 VIP 3220	76	21.7	51.8	216.0	193.1	153.2	203.9	--
Proseed	1882	82	24.1	49.3	205.3	200.5	150.6	202.7	--
Legend	40J081 GT	81	24.7	51.8	203.0	195.8	128.9	197.4	--
<b>Conventional hybrids<sup>5</sup></b>									
Proseed	1681	81	24.9	--	230.2	--	--	--	--
Mean			23.1	50.5	234.4	211.2	164.9	223.0	226.3
CV (%)			2.3	3.0	6.9	6.6	9.6	7.2	--
LSD 0.05			1.9	2.8	22.0	22.2	30.9	14.2	--
LSD 0.10			1.8	2.3	18.4	18.6	25.9	11.9	--

Planting Date: Grand Forks and Nelson - May 16, Marshall - May 17.

Harvest Date: Grand Forks and Marshall - Nov. 9, Nelson - Nov. 30.

<sup>1</sup>Relative maturity as given by industry.

<sup>2</sup>Grain moisture is an average of Grand Forks and Marshall, test weight is from samples from Nelson County only.

<sup>3</sup>Average is for Grand Forks and Marshall locations only due to high variability in moisture at Nelson County.

<sup>4</sup>Farmer provided check.

<sup>5</sup>Conventionals were included as part of the trial at the Grand Forks County site, so the same LSD values apply when comparing with non-conventionals. Because they were not included in all locations, there is no average value for the zone and they have not been sorted by yield as have the other hybrids.



**Table 7. 2019 Corn - Average of Northern Locations (Grand Forks, Marshall and Nelson Counties), Late Maturing ( ≥83).**

Authors, J. Ransom and D. Eisinger.

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield				
			Moisture <sup>2</sup>	Weight <sup>2</sup>	G. F.	Marshall	Nelson	Average <sup>3</sup>	2-yr. Avg.
			(%)	(lb/bu)	------(bu/a)-----				
Legacy	L-2347 VT2P	83	24.1	45.8	263.5	234.5	205.5	249.1	--
Legend	LR 9983 VT2PRIB	83	23.4	45.1	256.3	235.4	180.7	246.9	--
REA	2B861	86	25.2	47.5	255.8	236.1	177.9	245.8	228.2
Dairyland	DS-6686	86	25.3	45.3	263.3	221.5	156.8	243.5	--
Proseed	1984	84	24.7	45.9	253.3	224.4	165.3	238.8	--
Latham	LR 3827	88	30.1	46.9	254.5	208.1	153.7	231.8	--
Legacy	L-2817 VT2P	85	24.8	44.7	246.4	212.7	172.1	230.4	220.5
Peterson	71D83	83	22.5	47.7	234.0	225.5	174.2	228.7	214.9
Latham	LH 3397	83	22.6	51.0	240.3	216.1	161.3	228.3	--
Peterson	73S84	84	24.7	53.1	233.0	224.3	184.1	227.9	--
Latham	LH 3755	87	28.4	52.5	244.4	209.5	182.8	227.1	--
Integra	3537	85	25.1	49.3	239.8	211.5	144.7	226.1	--
Croplan <sup>4</sup>	23-30	83	23.2	49.4	236.0	212.6	171.7	225.7	--
REA	2B862	86	27.3	46.8	237.4	215.6	152.2	225.4	--
Dairyland	EXP-08509	83	25.5	48.0	237.5	215.0	185.3	225.4	--
Legacy	L-2314 VT2P	83	23.9	47.1	233.9	215.1	163.9	224.9	211.5
Latham	LH 3695	86	25.2	46.0	246.6	197.9	147.4	221.3	--
REA	2B872	87	26.3	47.5	227.5	205.4	138.2	216.0	219.7
Stine	9101-G	84	26.8	46.9	222.4	196.3	147.7	209.4	205.0
Latham	LH 3547	85	25.5	48.0	221.5	194.1	150.8	207.1	--
Dekalb <sup>4</sup>	DKC33-78	83	23.1	48.6	217.6	194.2	151.1	202.7	--
Proseed	1483	83	25.1	48.2	199.8	165.1	106.8	178.9	205.8
<b>Conventional hybrids<sup>5</sup></b>									
Proseed	1684	84	24.7	--	212.9	--	-	--	--
Renegade	EXP89	89	26.4	--	211.9	--	--	--	--
Mean			25.1	47.8	239.3	212.3	162.5	225.5	215.1
CV (%)			2.3	3.0	6.9	6.6	9.6	7.2	--
LSD 0.05			1.9	2.8	22.0	22.2	30.9	14.2	--
LSD 0.10			1.8	2.3	18.4	18.6	25.9	11.9	--

Planting Date: Grand Forks and Nelson - May 16, Marshall - May 17.

Harvest Date: Grand Forks and Marshall - Nov. 9, Nelson - Nov. 30.

<sup>1</sup>Relative maturity as given by industry.<sup>2</sup>Grain moisture is an average of Grand Forks and Marshall, test weight is from samples from Nelson County only.<sup>3</sup>Average is for Grand Forks and Marshall locations only due to high variability in moisture at Nelson County.<sup>4</sup>Farmer provided check.<sup>5</sup>Conventionals were included as part of the trial at the Grand Forks County site, so the same LSD values apply when comparing with non-conventionals. Because they were not included in all locations, there is no average value for the zone and they have not been sorted by yield as have the other hybrids.

**Table 8. 2019 Corn - Dryland - Conventional - Carrington - Authors, M. Ostlie, B. Schatz and T. Indergaard.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain Moisture (%)	Test Weight (lb/bu)	Grain Yield	
					2019	2-yr. Avg.
					------(bu/a)-----	
Renegade	EXP89	89	24.3	53.3	221.1	--
Renegade	R2-1695	95	24.0	54.4	215.3	--
Proseed	1797	97	23.8	52.8	212.6	--
Viking	O.71-90UPGS	90	23.6	53.2	203.4	--
Viking	O.58-85P	85	22.7	57.2	198.5	--
Viking	O.45-88P	88	24.2	54.6	192.8	--
Viking	O.99-79P	79	23.0	55.3	183.8	--
Proseed	1689	89	24.6	54.5	182.0	181.9
Renegade	R1-1592	92	24.0	55.0	174.4	--
Proseed	1687	87	24.1	54.6	172.9	181.4
Proseed	1684	84	21.7	53.5	170.3	166.0
Viking	O.87-80P	80	22.4	52.6	156.0	--
Mean			23.5	54.2	190.4	176.4
CV %			3.8	2.2	7.7	--
LSD 0.05			1.3	1.7	21.1	--
LSD 0.10			1.1	1.4	17.6	--

Planting Date: May 9. Harvest Date: Nov. 21. Previous crop: durum.

<sup>1</sup>Relative maturity as given by industry.**Table 9. 2019 Corn - Hettinger - Authors, J. Rickertsen and M. Wells.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain Moisture (%)	Test Weight (lb/bu)	Grain Yield	
					2019	2-yr. Avg.
					------(bu/a)-----	
Integra	3718	87	20.7	47.8	142.6	128.0
Legend	LR 9583	83	19.1	52.0	136.0	123.4
Proseed	1483	83	18.6	52.0	135.3	126.4
Integra	3537	85	17.9	51.0	134.8	122.8
Legend	LR 9983	83	19.4	51.4	132.4	--
Proseed	1787	87	18.5	51.1	129.5	122.5
Legend	LR 9886	86	21.2	46.9	128.7	109.4
Integra	3282	82	17.8	51.4	127.7	119.6
Legend	40J684	84	22.0	49.1	125.5	120.0
Proseed	1487	87	18.8	48.4	116.6	115.3
Proseed	1882	82	19.7	55.1	112.1	--
Legend	40J081	81	21.0	53.5	109.0	--
Mean			19.5	50.8	127.5	120.8
CV %			11.6	5.0	7.9	--
LSD 0.05			3.3	3.6	17	--
LSD 0.10			2.7	3	14.1	--

Planted: May 30. Harvested: Nov. 19. Previous crop: oats.

<sup>1</sup>Relative maturity as given by industry.

**Table 10. 2019 Corn - Fingal (Carrington REC) - Authors, M. Ostlie, B. Schatz and T. Indergaard.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield	
			Moisture (%)	Weight (lb/bu)	2019 ----- (bu/a)	2-yr. Avg.
Proseed	1794	94	28.6	48.7	215.8	--
Latham	LH 3937	89	27.8	48.0	198.6	--
Dairyland	DS-3715AM	97	28.1	45.8	194.7	252.0
Dairyland	DS-3550AM	95	31.9	43.4	189.1	--
Legacy	L-2918	89	26.8	49.1	187.0	--
Integra	4119	91	27.9	48.7	185.2	234.0
Latham	LH 3695	86	27.1	49.1	185.1	--
Dyna-Gro	D35VC35	94	26.4	51.0	184.3	--
Legacy	L-3517	95	29.3	47.5	183.9	235.0
Proseed	1896	96	34.3	44.4	182.9	--
Proseed	1790	90	26.8	49.4	182.2	226.3
Legacy	L-3617	96	33.3	44.9	181.2	241.4
Legacy	L-3017	90	26.7	49.2	180.0	235.3
Dairyland	RPM-3519AM	96	29.4	47.4	179.2	233.7
Proseed	1797	97	32.4	44.7	179.2	--
Peterson	74J89	89	25.7	50.2	178.7	234.8
Latham	LH 4242	92	31.5	46.3	178.6	--
Proseed	1591	91	25.8	50.2	177.7	--
Latham	LH 3755	87	27.2	49.2	177.3	--
Legacy	L-3419	94	29.1	48.0	176.5	--
Integra	3629	86	23.9	53.1	173.8	222.6
Integra	3718	87	27.6	48.8	173.3	225.8
Dyna-Gro	D34VC54	92	31.1	46.1	173.3	232.2
Peterson	73S84	84	23.8	52.1	170.7	--
Latham	LH 4375	93	28.0	49.4	169.8	--
Dairyland	DS-3370AM	93	31.3	44.3	168.2	--
Dyna-Gro	D27VC87	87	23.8	52.7	167.8	217.6
Dairyland	DS-3750AM	97	31.5	46.6	163.3	--
Latham	LH 4517	95	33.1	44.4	161.2	--
Latham	LH 4187	91	29.4	46.7	144.0	--
Mean			28.6	48.0	178.7	232.5
CV %			4.9	2.5	8.8	--
LSD 0.05			2.0	1.7	22.2	--
LSD 0.10			1.7	1.4	18.5	--

Planting Date: May 17. Harvest Date: Nov. 15. Previous crop: soybean.

<sup>1</sup>Relative maturity as given by industry.

**Table 11. 2019 Corn - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain Moisture (%)	Test Weight (lb/bu)	Grain Yield	
					2019	2-yr. Avg.
					------(bu/a)-----	
Dairyland	RPM-3519AM	96	27.6	52.1	236.1	239.0
Rob-See-Co	RC4227-3220	94	28.6	53.0	228.5	--
REA	5B984	98	33.0	49.1	228.2	--
Dairyland	DS-3370AM	93	24.9	51.9	226.7	--
REA	3B923	92	28.3	51.7	223.7	222.9
REA	4B975	97	31.5	51.4	223.2	--
Proseed	1790	90	28.9	51.5	222.1	--
Legacy	L-4118	99	31.1	49.8	221.2	222.6
REA	3B912	91	28.7	51.8	219.9	--
REA	4B965	97	32.0	51.5	218.5	--
Proseed	1794	94	33.5	52.2	217.2	215.9
Proseed	1591	91	27.4	50.6	217.0	--
Peterson	79N94	94	30.2	49.6	213.4	215.6
Legacy	L-3718	97	35.0	49.8	213.1	223.1
Legacy	L-3517	95	31.8	51.8	210.6	216.2
Rob-See-Co	RC4759-3220	97	30.5	50.4	208.8	--
Legacy	L-3617	96	33.8	51.4	207.9	212.1
Integra	4509	95	36.2	51.2	206.2	211.9
Innotech	IC4166-3110A	91	30.9	51.8	205.8	
Dairyland	DS-3750AM	97	30.6	53.4	205.6	--
Rob-See-Co	RC4343-3220A	93	32.8	49.9	203.6	210.8
Rob-See-Co	RC4848-3000GT	98	35.7	50.0	198.9	204.8
Proseed	1998	98	29.8	50.3	198.1	--
Peterson	78G95	95	36.6	49.9	195.1	--
Proseed	1896	96	36.6	50.6	191.9	--
Mean			31.4	51.1	213.6	215.6
CV %			4.6	2.4	4.7	--
LSD 0.05			2.0	1.7	14.1	--
LSD 0.10			1.7	1.5	11.8	--

Planted: May 16. Harvested: Nov. 17. Previous crop: soybean.

<sup>1</sup>Relative maturity as given by industry.

**Table 12. 2019 Corn - Irrigated - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield	
			Moisture (%)	Weight (lb/bu)	2019 -----(bu/a)-----	2-yr. Avg.
Dairyland	DS-3550AM	95	22.9	51.2	275.3	--
Dairyland	DS_3715AM	97	21.8	52.0	267.7	268.3
REA	4B965	97	24.0	52.0	266.2	259.8
REA	5B984	98	23.2	50.7	264.6	--
Legacy	L-4118	99	22.2	53.0	264.5	263.0
Legacy	L-3517	95	23.0	52.9	263.4	252.1
REA	4B975	97	22.4	52.9	262.8	--
Proseed	1896	96	23.0	52.0	260.4	--
Dairyland	DS-3750AM	97	21.6	55.3	258.4	--
Legacy	L-3718	97	22.6	52.1	257.9	264.2
Legacy	L-3617	96	22.1	53.4	253.0	251.3
Peterson	78G95	95	22.7	52.3	252.2	--
REA	3B923	92	21.9	53.4	250.2	205.5
Rob-See-Co	RC4343-3220A	93	22.2	53.0	249.3	243.9
Innotech	RC4166-3110A	91	20.8	55.0	249.0	--
Proseed	1998	98	21.8	53.2	247.4	--
Proseed	1790	90	22.0	53.2	247.4	--
Proseed	1794	94	22.6	52.4	247.4	234.1
Rob-See-Co	RC4759-3220	97	22.2	53.1	247.2	--
Peterson	79N94	94	22.3	52.1	246.8	232.3
Integra	4509	95	23.6	51.2	243.6	252.1
Proseed	1591	91	21.5	53.7	240.2	--
Mean			22.4	52.7	255.2	245.8
CV %			2.3	1.2	4.5	--
LSD 0.05			0.7	0.9	16.4	--
LSD 0.10			0.6	0.8	13.7	--

Planted: May 15. Harvested: Nov. 13. Previous crop: soybean.

<sup>1</sup>Relative maturity as given by industry.

**Table 13. 2019 Corn - Minot (North Central REC) - Authors, E. Eriksmoen, J. Effertz and A. Kraklau.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield	
			Moisture	Weight	2019	2-yr. Avg.
			(%)	(lb/bu)	----- (bu/a) -----	
Hefty	H3322	83	25.6	58.6	141.9	102.9
Hefty	H3432	84	27.1	57.8	126.3	--
Hefty	H2922	79	26.7	62.4	121.9	99.4
Hefty	H3302	83	26.3	56.3	120.5	91.2
Legacy	L-2347 VT2P	83	28.3	59.8	118.4	--
Peterson	73S84	84	28.8	61.0	118.0	--
REA	2B862	86	29.8	58.9	116.5	--
REA	1B780	79	26.8	58.1	112.2	90.1
Legacy	L-2314 VT2P	83	30.2	58.9	110.6	96.3
Hefty	H3122	81	27.0	59.1	109.5	87.8
Legacy	L-2019 VT2P	80	26.5	59.9	107.6	--
Dyna-Gro	D22QH42	82	25.1	59.3	106.5	--
Peterson	78A82	82	28.6	59.1	104.3	81.6
REA	1B720	72	24.9	60.0	104.1	--
Integra	3009 VT2P	80	25.0	59.3	103.7	--
Integra	3537 VT2P	85	29.0	59.1	101.9	88.4
Thunder	6079 VT2P	79	25.4	60.6	101.3	--
Integra	3282 VT2P	82	26.8	58.2	100.5	82.3
Peterson	71V81	81	26.7	58.2	97.9	88.0
Hefty	H2802	78	23.6	58.9	97.0	76.5
Hefty	H3022	80	26.7	59.7	96.6	77.3
Thunder	6782 VT2P	82	26.2	57.8	93.9	84.4
Proseed	1980	80	23.2	58.3	92.0	--
Thunder	6081 3220	81	29.1	62.2	91.7	--
Thunder	6074 VT2P	74	24.7	57.0	90.6	--
Integra	3325-3010A	83	30.3	59.4	90.4	82.2
Hefty	H2532	75	25.7	59.2	87.9	--
Legacy	L-1818 VT2P	79	25.7	60.3	86.7	--
Legacy	L-2213 VT2P	80	25.0	59.8	85.5	76.8
Integra	2803 VT2P	78	28.0	60.6	82.8	70.4
Mean			27.0	59.2	104.0	84.9
CV %			9.9	3.1	10.6	--
LSD 0.05			NS	3	18.1	--
LSD 0.10			NS	2.5	15	--

Planted: May 9. Harvested: Oct. 28.

<sup>1</sup>Relative maturity as given by industry.

**Table 14. 2019 Corn - Dryland - Williston - Authors, J. Bergman, G. Pradhan, C. Wahlstrom and M. Miller.**

Company/Brand	Hybrid	RM <sup>1</sup>	Test Weight (lb/bu)	Grain Yield	
				2019	2-yr. Avg.
				----- (bu/a) -----	
Proseed	1974	74	54.4	107.0	--
REA	2B862	86	49.7	98.6	--
Proseed	1980	80	53.1	95.6	--
Integra	3009 VT2P	80	54.2	95.0	--
Peterson	73S84	84	52.0	92.0	--
Peterson	71D83	83	52.2	91.9	--
Peterson	71V81	81	52.0	91.3	--
Syng NK	NK8005-3110A	80	54.2	90.8	--
Proseed	1480VT2P	80	53.2	89.6	--
REA	2A872	87	49.4	88.3	138.5
REA	1B780	79	51.1	87.6	142.9
REA	1B720	72	56.2	87.4	--
Integra	3718 VT2P RIB	87	47.8	86.1	--
Integra	3282 VT2P RIB	82	52.7	85.6	--
Rob-See-Co	IC2862	78	55.5	84.0	--
Syng NK	NK7837-3220	78	53.4	82.8	--
Integra	3537 VT2P RIB	85	49.6	76.2	--
Syng NK	NK8204-3220	82	51.2	73.9	--
Rob-See-Co	RC3240	82	56.1	72.4	--
Syngenta	NK8519-3220	85	48.8	66.6	--
Mean			52.3	87.6	140.7
CV %			1.8	18.3	--
LSD 0.05			1.3	22.7	--
LSD 0.10			1.1	18.9	--

Planted: May 15 and 20. Harvested: Oct. 21. Previous crop: soybean.

<sup>1</sup>Relative maturity as given by industry.

**Table 15. 2019 Corn - Irrigated - Williston - Authors, J. Jacobs and T. Tjelde.**

Company/Brand	Hybrid	RM <sup>1</sup>	Grain	Test	Grain Yield	
			Moisture	Weight	2019	2-yr. Avg.
			(%)	(lb/bu)	------(bu/a)-----	
Proseed	1980	80	19.8	52.1	184.3	--
Peterson	73S84	84	21.1	50.4	168.9	--
REA	2B861	86	23.0	49.1	168.9	196.4
Proseed	1978	78	18.3	53.4	164.2	--
Golden H.	G85Z56-3220-EZ1	85	21.7	48.1	162.1	--
Proseed	1974	74	19.5	53.5	161.5	--
REA	1B780	79	20.7	49.6	160.1	179.2
Syng NK	NK8519-3220	85	20.6	48.5	159.3	--
REA	2B862	86	23.2	48.6	158.1	--
Peterson	71V81	81	20.1	52.6	155.9	--
Integra	3718 VT2P RIB	87	24.3	46.3	154.3	182.9
Syng NK	NK8005-3110A	80	21.0	54.6	152.3	--
Dyna-Gro	D22QH42	82	21.9	54.2	149.0	--
Syng NK	NK7837-3220	78	20.8	53.7	145.4	--
Peterson	71D83	83	20.0	52.1	145.1	--
Golden H.	G78C29-3220-EZ1	78	21.5	53.5	142.3	--
Golden H.	G82M47-3220-EZ1	82	19.9	49.3	140.0	--
Syng NK	NK8204-3220	82	19.9	50.0	138.7	--
REA	1B720	72	23.2	55.5	137.9	--
Integra	3537 VT2P RIB	85	20.3	49.6	135.8	161.5
Integra	3282 VT2P RIB	82	20.7	50.2	133.4	161.2
Golden H.	G80Q01-3110A	80	20.9	54.7	132.0	--
Mean			21.0	51.4	152.3	176.2
CV %			7.8	2.1	11.5	--
LSD 0.05			2.3	1.5	23.5	--
LSD 0.10			1.9	1.3	19.6	--

Planted: May 14. Harvested: Nov. 26. Previous crop: soybean.

<sup>1</sup>Relative maturity as given by industry.

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